

3762

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Qingsheng Zhu et al.

Title:

CARDIAC RHYTHM MANAGEMENT SYSTEM FOR EDEMA

Docket No.: 279.374US1

Serial No.: 09/919,483

Filed: July 31, 2001

Due Date: N/A

Examiner: Scott M. Getzow

Group Art Unit: 3762

Mail Stop Amendment

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

We are transmitting herewith the following attached items (as indicated with an "X"):

- ☒ Return postcard.
- ☒ Communication Concerning Related Applications (2 pgs.).
- ☒ Supplemental Information Disclosure Statement (2 pgs.), Form 1449 (4 pgs.), and copies of 46 cited documents.

Please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

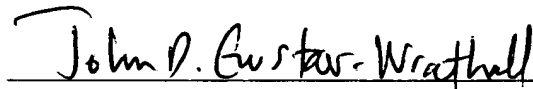
Customer Number 21186

By: 

Atty: Suneel Arora

Reg. No. 42,267

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6 day of February, 2006.



Name

Signature 

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

(GENERAL)



S/N 09/919,483

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Qingsheng Zhu et al. Examiner: Scott M. Getzow
Serial No.: 09/919,483 Group Art Unit: 3762
Filed: July 31, 2001 Docket: 279.374US1
Title: CARDIAC RHYTHM MANAGEMENT SYSTEM FOR EDEMA

COMMUNICATION CONCERNING RELATED APPLICATION(S)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicants would like to bring to the Examiner's attention the following related application(s) in the above-identified patent application:

<u>Serial/Patent No.</u>	<u>Filing Date/Issue Date</u>	<u>Attorney Docket</u>	<u>Title</u>
11/126,689	May 11, 2005	279.857US1	ENHANCEMENTS TO THE DETECTION OF PULMONARY EDEMA WHEN USING TRANSTHORACIC IMPEDANCE
11/126,723	May 11, 2005	279.948US1	IMPROVED SENSITIVITY AND SPECIFICITY OF PULMONARY EDEMA DETECTION WHEN USING TRANSTHORACIC IMPEDANCE
10/267,982	October 9, 2002	279.B24US1	DETECTION OF CONGESTION FROM MONITORING PATIENT RESPONSE TO A RECUMBENT POSITION

Continuations and divisionals may be later filed on the cases listed above, or cited to the Examiner in any previous Communication Concerning Related Applications. Applicants request that the Examiner review all continuations and divisionals of the above-listed or previously-cited patent applications before allowing the claims of the present patent application.

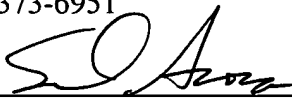
Respectfully submitted,

QINGSHENG ZHU ET AL.

By Applicants' Representatives,

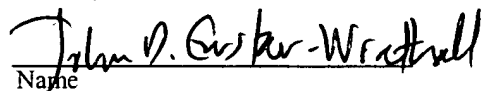
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6951

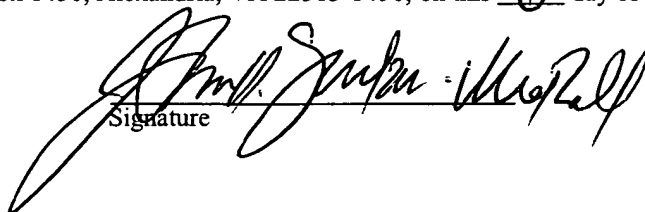
Date February 6, 2006

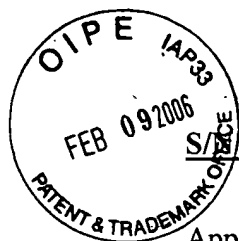
By 

Suneel Arora
Reg. No. 42,267

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6 day of February, 2006.


Name


Signature



S/09/919,483

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Qingsheng Zhu et al.	Examiner:	Scott M. Getzow
Serial No.:	09/919,483	Group Art Unit:	3762
Filed:	July 31, 2001	Docket:	279.374US1
Title:	CARDIAC RHYTHM MANAGEMENT SYSTEM FOR EDEMA		

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Supplemental Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Supplemental Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Supplemental Information Disclosure Statement considered.

Pursuant to 37 C.F.R. 1.98(a)(2), Applicant believes that copies of cited U.S. Patents and Published Applications are no longer required to be provided to the Office. Notification of this change was provided in the United States Patent and Trademark Office OG Notices dated October 12, 2004. Thus, Applicant has not included copies of any US Patents or Published Applications cited with this submission. Should the Office require copies to be provided, Applicant respectfully requests that notice of such requirement be directed to Applicant's below-signed representative. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

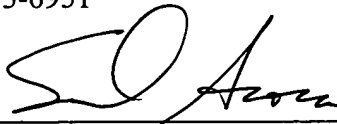
QINGSHENG ZHU ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6951

Date February 6, 2006

By



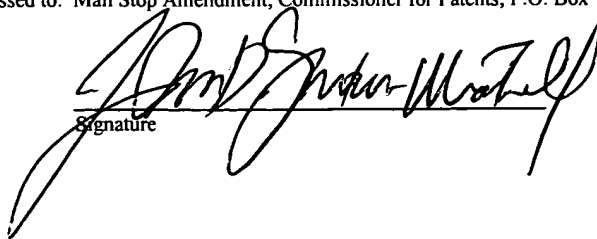
Suneel Arora
Reg. No. 42,267

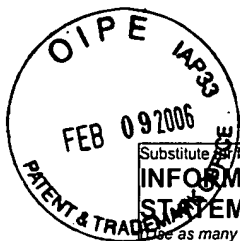
CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6 day of February, 2006.

Name

John P. Gustaf-Wentzell

Signature





Substitute for form 1449A/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)

Complete if Known

Application Number	09/919,483
Filing Date	July 31, 2001
First Named Inventor	Zhu, Qingsheng
Group Art Unit	3762
Examiner Name	Getzow, Scott

Sheet 1 of 4

Attorney Docket No: 279.374US1

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
	US-2003/0105496	06/05/2003	Yu, et al.	12/05/2001
	US-2003/0176896A1	09/18/2003	Lincoln, William C., et al.	03/13/2002
	US-2005/0283197A1	12/22/2005	Daum, D. R., et al.	05/31/2005
	US-4,559,946	12/24/1985	Mower, Morton M.	06/18/1982
	US-4,693,253	09/15/1987	Adams, Theodore	03/23/1981
	US-4,880,005	11/14/1989	Pless, Benjamin D., et al.	05/23/1988
	US-4,904,472	02/27/1990	Belardinelli, Luiz , et al.	04/10/1987
	US-4,980,379	12/25/1990	Belardinelli, Luiz , et al.	06/30/1988
	US-5,002,052	03/26/1991	Haluska, Edward A.	08/29/1988
	US-5,215,083	06/01/1993	Drane, Geoffrey A., et al.	10/07/1991
	US-5,282,836	02/01/1994	Kreyenhagen, Paul E., et al.	10/23/1992
	US-5,366,485	11/22/1994	Kroll, Mark W., et al.	10/27/1992
	US-5,405,362	04/11/1995	Kramer, George C., et al.	12/20/1993
	US-5,431,682	07/11/1995	Hedberg, Sven-Erik	09/02/1993
	US-5,782,879	07/21/1998	Rosborough, John P., et al.	06/02/1995
	US-5,978,705	11/02/1999	KenKnight, B. H., et al.	03/13/1998
	US-6,154,672	11/28/2000	Pendekanti, Rajesh , et al.	12/14/1998
	US-6,298,267	10/02/2001	Rosborough, John P., et al.	03/07/1900
	US-6,411,844	06/25/2002	Kroll, Mark W., et al.	10/19/1999

FOREIGN PATENT DOCUMENTS

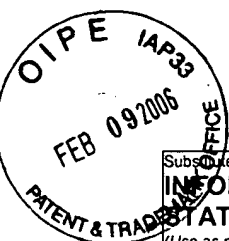
Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T ²
--------------------	---------------------	------------------	---	----------------

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		"Medtronic Announces European Release Of Innovative InSync Sentry Cardiac Resynchronization Therapy Defibrillator", http://www.medtronic.com/newsroom/news_20040614a.html , (2004),	
		"Medtronic: InSync Sentry 7298: Dual Chamber Implantable Cardioverter Defibrillator with Cardiac Resynchronization Therapy (VVE-DDR) and Opti-Vol Fluid Monitoring: Reference Manual", www.medtronic.com ,	
		ADAMICZA, A. , et al., "Changes in transthoracic electrical impedance during endotoxemia in dogs", <i>Acta Physiol Hung.</i> , 85(4), (1997-98),291-302	
		ADAMICZA, A. , et al., "Investigation of the thoracic electrical impedance during endotoxemia in dogs", <i>Acta Chir Hung.</i> , 36(1-4), (1997),1-3	
		BAARENDS, E. M., et al., "Body-water compartments measured by bio-electrical impedance spectroscopy in patients with chronic obstructive pulmonary disease", <i>Clinical Nutrition</i> , 17(1), (Feb., 1998),15-22	

EXAMINER

DATE CONSIDERED



Substitute for form 1449A/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)

Complete if Known

Application Number	09/919,483
Filing Date	July 31, 2001
First Named Inventor	Zhu, Qingsheng
Group Art Unit	3762
Examiner Name	Getzow, Scott

Sheet 2 of 4

Attorney Docket No: 279.374US1

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

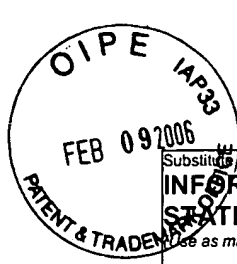
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		BELALCAZAR, ANDRES , et al., "Improved lung edema monitoring with coronary vein pacing leads", <u>Pacing and Clinical Electrophysiology</u> , 26(4 pt. II), Abstract 18,(Apr., 2003),933	
		BRADBURY, M. G., et al., "Assessment of the sensitivity of bioimpedance to volume changes in body water", <u>Pediatr Nephrol.</u> , 9(3), (June 1995),337-40	
		CHIOLERO, R. L., et al., "Assessment of changes in body water by bioimpedance in acutely ill surgical patients.", <u>Intensive Care Medicine</u> , 18(6), (1992),322-6	
		DEFAYE, P. , et al., "Automatic Recognition of Abnormal Respiratory Events During Sleep by a Pacemaker Transthoracic Impedance Sensor", <u>Journal of Cardiovascular Electrophysiology</u> , 15(9), (Sept., 2004),1034-40	
		DENNISTON, J. C., et al., "Measurement of pleural effusion by electrical impedance.", <u>Journal of Applied Physiology</u> , 38(5), (May, 1975),851-7	
		FOREMAN, B , et al., "Intra-thoracic impedance: a surrogate measure of thoracic fluid - fluid accumulation status trial (FAST)", <u>Journal of Cardiac Failure</u> , 10(4 Suppl), Abstract 251,(2004),S86	
		FORRO, M. , et al., "Total body water and ECFV measured using bioelectrical impedance analysis and indicator dilution in horses", <u>Journal of Applied Physiology</u> , 89(2), (Aug., 2000),663-71	
		FRERICHS, I. , et al., "Electrical impedance tomography in monitoring experimental lung injury", <u>Intensive Care Med.</u> , 24(8), (Aug., 1998),829-36	
		GARLAND, J. S., et al., "Measurement of extravascular lung water in hemodialysis patients using blood ultrasound velocity and optical density dilution.", <u>ASAIO Journal</u> 2002 48(4), (Jul.-Aug., 2002),398-403	
		GOTSHALL, R W., et al., "Bioelectric impedance as an index of thoracic fluid.", <u>Aviation Space and Environmental Medicine</u> , 70(1), (Jan., 1999),58-61	
		GRIMBERT, F. , et al., "Pulmonary water and thoracic impedance. Evaluation of a measurement technic]", <u>Annales de L'anesthésiologie Française</u> , 16 Spec No 2-3, French,(1975),157-63	
		HARRIS, N. D., et al., "Applications of applied potential tomography (APT) in respiratory medicine", <u>Clinical Physics and Physiological Measurement</u> , 8 Suppl A, (1987),155-65	
		ISHIBE, Y. , et al., "Transthoracic electrical impedance method for measurement of pulmonary edema in vivo", <u>Masui</u> , 27(13), Japanese,(Dec., 1978),1559-67	
		KIESLER, T. W., et al., "Impedance cardiography by use of a spot-electrode array to track changes in cardiac output in anesthetized dogs.", <u>Journal of the American Veterinary Medical Association</u> , 196(11), (June 1, 1990),1804-10	
		KOIZUMI, T. , "Changes of transthoracic impedance (zinf 0 and deltaz) in newborn infants", <u>Acta Neonatol. Jpn.</u> , 14(3), (1978),335-340	

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. † Applicant's unique citation designation number (optional) ‡ Applicant is to place a check mark here if English language Translation is attached



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	09/919,483
Filing Date	July 31, 2001
First Named Inventor	Zhu, Qingsheng
Group Art Unit	3762
Examiner Name	Getzow, Scott

Sheet 3 of 4

Attorney Docket No: 279.374US1

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

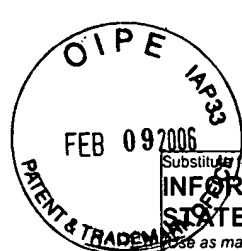
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		KUNST, P. W., et al., "Electrical impedance tomography in the assessment of extravascular lung water in noncardiogenic acute respiratory failure", <u>Chest</u> , 116(6), (Dec., 1999),1695-702	
		LARSEN, F. , et al., "Influence of furosemide and body posture on transthoracic electrical impedance in AMI", <u>Chest</u> , 90(5), (733-7),Nov., 1986	
		LAU, C. P., "The range of sensors and algorithms used in rate adaptive cardiac pacing", <u>Pacing and clinical electrophysiology: PACE</u> , 15(8), (Aug., 1992),1177-211	
		NEWELL, J. C., et al., "Assessment of acute pulmonary edema in dogs by electrical impedance imaging", <u>IEEE Transactions on Biomedical Engineering</u> , 43(2), (Feb., 1996),133-138	
		NIERMAN, D. M., et al., "Evaluation of transthoracic bioelectrical impedance analysis in monitoring lung water during diuresis", <u>Applied Cardiopulmonary Pathophysiology</u> , 7(1), (1997),57-62	
		NOBLE, T. J., et al., "Diuretic induced change in lung water assessed by electrical impedance tomography", <u>Physiol Meas.</u> , 21(1), (Feb., 2000),155-63	
		PETERSEN, J. R., et al., "Electrical impedance measured changes in thoracic fluid content during thoracentesis", <u>Clin Physiol.</u> , 14(4), (July 1994),459-66	
		RAAIJMAKERS, E. , et al., "Estimation of non-cardiogenic pulmonary oedema using dual-frequency electrical impedance.", <u>Medical & Biological Engineering & Computing</u> , 36(4), (July, 1998),461-6	
		ROSBOROUGH, JOHN P., et al., "Electrical Therapy for Pulseless Electrical Activity", <u>NASPE</u> , 23(4), Part II, Abstract,(April 2000),591	
		SHOCHAT, M. , et al., "Internal thoracic impedance monitoring: a new prospect in acute heart failure", <u>European Heart Journal</u> , 25(Supp), (Aug.-Sept. 2004),P72-72	
		SMITH, R. M., et al., "Canine thoracic electrical impedance with changes in pulmonary gas and blood volumes.", <u>Journal of Applied Physiology</u> , 53(6), (Dec., 1982),1608-13	
		SPINALE, F. G., et al., "Noninvasive estimation of extravascular lung water using bioimpedance.", <u>The Journal of Surgical Research</u> , 47(6), (Dec., 1989),535-40	
		STADLER, R. , et al., "Automated detection of decreases in intrathoracic impedance to predict CHF hospitalization", <u>Abstract 263, 26(4 pt II)</u> , Abstract 16,(Apr., 2003),932	
		STAUB, N. C., "The measurement of lung water content.", <u>The Journal of Microwave Power</u> , 18(3), (Sep., 1983),259-63	
		TANG, W. , "Assessment of total body water using bioelectrical impedance analysis in neonates receiving intensive care", <u>Arch Dis Child Fetal Neonatal Ed.</u> , 77(2), (Sept., 1997),F123-6	
		TEMPEL, G. , et al., "Transthoracic electrical impedance in anaesthesia and intensive care.", <u>Resuscitation</u> , 6(2), (1978),97-105	

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	09/919,483
Filing Date	July 31, 2001
First Named Inventor	Zhu, Qingsheng
Group Art Unit	3762
Examiner Name	Getzow, Scott

Sheet 4 of 4

Attorney Docket No: 279.374US1

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		WANG, L. , et al., "Impedance based prediction of CHF admission precedes symptoms in heart failure patients", <u>Hearhythm : the official journal of the Heart Rhythm Society</u> , 1(Suppl 1), Abstract 679,(2004),S213	
		WANG, L. , et al., "Prediction of CHF hospitalization by ambulatory intrathoracic impedance measurement in CHF patients is feasible using pacemaker or ICD lead systems", <u>Pacing and Clinical Electrophysiology</u> , 26(4 pt. II), Abstract 123,(Apr., 2003),959	
		YU, C. , et al., "Changes in device based thoracic impedance in decompensating congestive heart failure", <u>Circulation</u> , 104(17 supplement), Abstract 1994,(2001),II-419	
		YU, C. M., et al., "Correlation of device-based intra-thoracic impedance and patient fluid status during intravenous diuretic therapy in acute CHF", <u>Euopean Heart Journal</u> , 23(Abstract Supplement), (2002),158	
		YU, C. , et al., "Device-based intra-thoracic impedance correlates with fluid status and provides automaticed prediction of CHF hospitalization", <u>Journal of Cardiac Failure</u> , 10(4 Suppl), Abstract 354,(2004),S113	
		YU, C. , et al., "Early warning of CHF hospitalization by intra-thoracic impedance measurement in CHF patients with pacemakers", <u>Pacing and Clinical Electrophysiology: PACE</u> , 24(4 pt II), Abstract 19,(2002),527	
		YU, C. M., et al., "Impedance measurements from implanted devices provide automated prediction of CHF hospitalization", <u>European Heart Journal</u> , 25(Supp), (Aug.-Sept. 2004),P27-27	
		YU, C. M., et al., "Intrathoracic impedance: A surrogate measure of fluid retention and predictor of hospitalization in patients with heart failure", <u>Journal of the American College of Cardiology</u> , 41(6 Supplement A), Abstract 1206-70,(2003),210A	
		ZELLNER, J. L., et al., "Bioimpedance: a novel method for the determination of extravascular lung water.", <u>The Journal of Surgical Research</u> , 48(5), (May 1990),454-9	
		ZIMA, E. , "Intracardiac impedance in biventricular electrode configuration for left ventricular volume monitoring", <u>European Heart Journal</u> , 25(Supp), (Aug.-Sept. 2004),P165-165	

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional) ² Applicant is to place a check mark here if English language Translation is attached